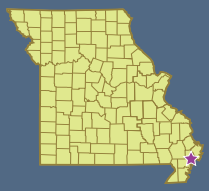
River Bends

Conservation Opportunity Area



Mississippi River Alluvial Basin

Swamps and bottomland forests still occur in the River Bends Conservation Opportunity Area.

Ross Glenn, Missouri Department of Conservation

Early explorers to the Bootheel region of southeast Missouri discovered a landscape of floodplains with giant trees. Bottomland trees grew to enormous proportions in the fertile earth. Regular flooding over millions of years created bottomland forests, swamps, marshes and oxbow wetlands. Over the past two centuries, settlers cleared the land and drained the swamps to create productive cropland.

The River Bends Conservation Opportunity Area (COA) includes several important blocks of remnant forest centered at Donaldson Point Conservation Area and Big Oak Tree State Park. Forested lands are also owned by the forest products industry – agencies that implement conservation practices, are adept at producing rapid forested cover and have significant rotational acreages of forested lands.

Land along the Mississippi River is still regularly influenced by flooding. In most areas, however, the timing, duration, depth and velocity of flood events have been altered, eliminating much of the natural flooding important to swamp and wetland natural communities.

In addition to the towering hickories and majestic oaks, rich soils provide habitat for green ash, swamp cottonwood, American elm, black willow, persimmon, baldcypress and patches of giant cane. Bottomland trees within Big Oak Tree State Park are unsurpassed in the state for size, with six qualifying as state champions of their species and two registered as national champions. More than 150 kinds of birds live among the lofty bottomland trees, including prothonotary warblers, cerulean warblers, red-shouldered hawks, Mississippi kites and fish crows.

River Bends Conservation Strategies

- Reforest bottomlands to create larger blocks of continuous bottomland forest.
- Promote partnerships with the forest products industry; provide them with assistance in the implementation of conservation actions on their properties.
- Reestablish connectivity of the Mississippi River with the floodplain through projects that emulate backwater flooding.
- Recover slough and oxblow lake natural communities.
- Identify, protect and manage wetland natural communities, providing habitat for migratory waterfowl, shorebirds, wading birds, amphibians and reptiles.
- Promote the Wetland Reserve Program (and other federal programs) through private landowner assistance programs and outreach and education efforts.
- Protect and enhance existing habitats for mussels, native fish and invertebrates.
- Control invasive exotic species.

Ross Glenn, Missouri Department of Conservation

***Bald cypress trees** produce "knees" to facilitate gas exchange. Because it is resistant to wood-rotting fungi, cypress is a valued lumber for shingles, trim and benches.*

Priority Research and Inventory Needs

- Inventory forest interior birds using remnant forest blocks.
- Determine the most effective ways to reforest converted bottomland forests.
- Investigate methods to control reed canary grass at Ten Mile Pond Conservation Area.
- Monitor cane stands at Donaldson Point; assess long-term survival of canebrake restorations.
- Conduct comprehensive surveys for amphibians and reptiles.

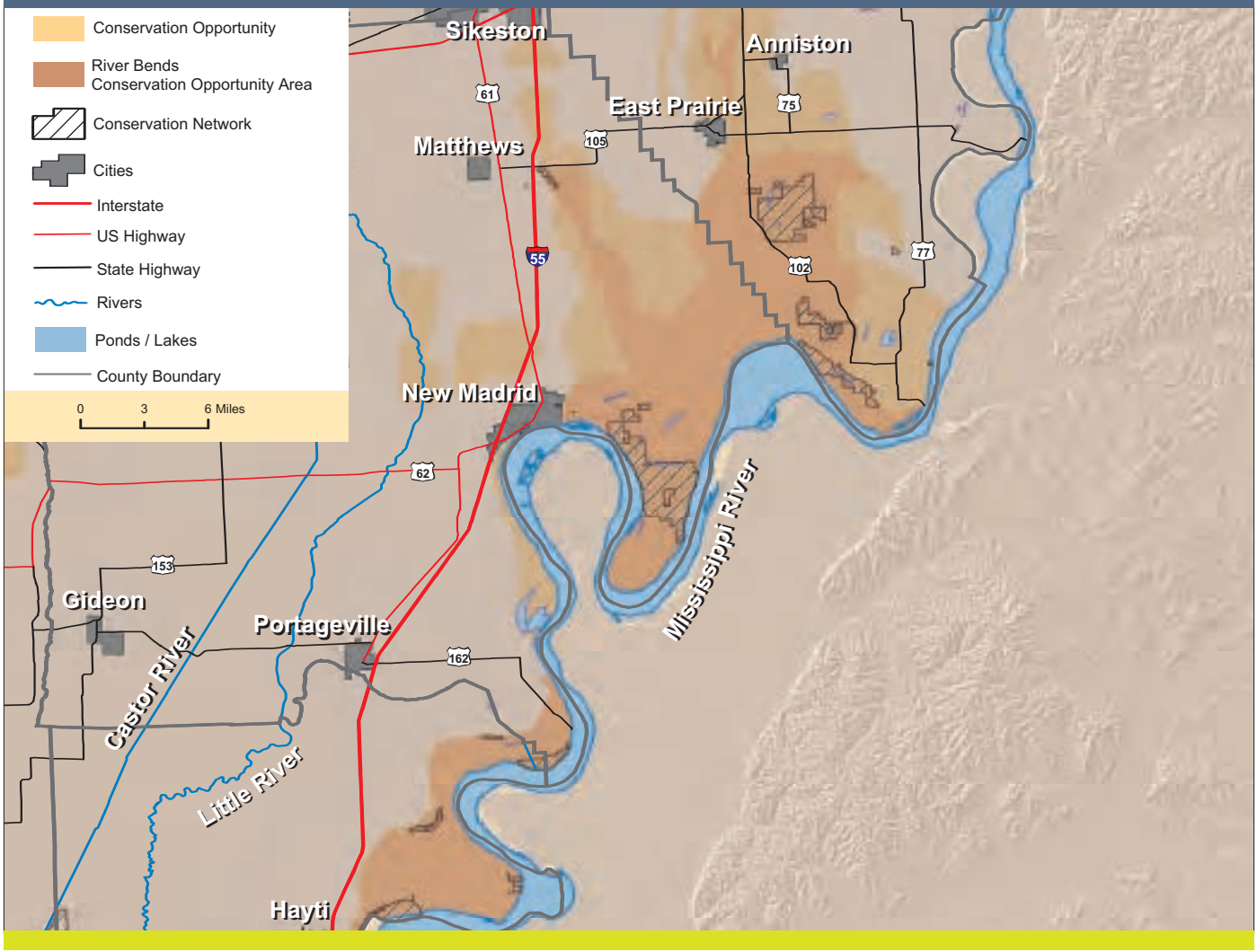
Conservation Partners

Existing: Four-Seasons Audubon Society; Ducks Unlimited (DU); MeadWestvaco Corporation; Southeast Missouri State University; Missouri Department of Natural Resources (DNR); Missouri Department of Conservation (MDC)

Potential: National Wild Turkey Federation (NWTF); American Fisheries Society; Audubon Missouri; The Nature Conservancy – Missouri Chapter; Sierra Club – Ozark Chapter; Missouri Stream Teams; private landowners; U.S. Army Corp of Engineers; U.S. Fish and Wildlife Service (USFWS); National Resource Conservation Service (NRCS)

*The federally endangered **interior least tern** makes its nest on sand islands in the lower Mississippi River. Adult terns eat fish that are less than 4 inches long. When rivers are leveed, channelized and restricted with dikes and dams, native river fish have fewer opportunities to spawn on the floodplain, which translates into fewer small fish for terns to eat.*

River Bends Conservation Opportunity Area



Funding Sources

Existing: MDC annual budget; MDC State Wildlife Grants; MDC Private Lands Cost Share Program; DNR annual budget; DU Conservation Projects Program; Soil and Water Conservation District State Cost Share Funds; Farm Service Agency Conservation Reserve Program; NRCS Wetland Reserve Program; NRCS Environmental Quality Incentives Program; NRCS Wildlife Habitat Incentive Program

Promising Future Sources: MDC Landowner Incentive Funds; USFWS Partners for Fish and Wildlife Program; USFWS North America Wetlands Conservation Act Grants; National Fish and Wildlife Foundation Grants; NWTF Wild Turkey Super Fund; Missouri Bird Conservation Initiative Grants

Existing Conservation Network

Big Oak Tree State Park (Big Oak Tree Natural Area); Donaldson Point Conservation Area; Ten Mile Pond Conservation Area; Seven Island Conservation Area; Gayoso Bend Conservation Area; Girvin Conservation Area; Wolf Bayou Conservation Area (Wolf Bayou Natural Area); DeSoto Conservation Area; Twin Borrow Pits Conservation Area; Big Oak Lake; Swift Ditch Access; Seven Island Access; St. John's Bayou Access

Jim Rathert, Missouri Department of Conservation

Big Oak Tree State Park

The 1,000-acre patch of bottomland forest in Big Oak Tree State Park stands as testimony to the once vast unbroken swamplands that stretched from Missouri's Bootheel to the Gulf of Mexico. Efforts continue to restore the park's currently altered water cycle.

Cliff White, Missouri Department of Conservation

Conservation Challenges

The River Bends Conservation Opportunity Area has a number of sizeable forest remnants even though much of the land has been drained and converted to cropland. Remaining natural vegetation is affected by reduced flooding and habitat fragmentation. Expanding the area of influence and size of forest systems will assist in long-term conservation. Conservation and restoration efforts around existing public lands and other privately owned remnants might ensure the long-term sustainability of larger areas. Success will require better integration of agriculture and natural ecosystems. Potential obstacles to conservation success include continued infrastructure developments that reduce natural flooding, likely irreversible loss of natural vegetation, shifting tree regeneration patterns and a lack of funding and staff for conservation efforts.

To learn more about the River Bends Conservation Opportunity Area, please contact:

Missouri Department of Conservation
Wildlife Division
P.O. Box 180
Jefferson City, MO 65102-0180